

UTAH NATIONAL GUARD BRIGHAM CITY ARMORY - BOILER REPLACEMENT

DFCM PROJECT NO. 07182470
BRIGHAM CITY, UTAH

DFCM DESIGN AND CODE CRITERIA

(Fee A.E: Attach and fill in applicable data for each drawing submittal)

Applicable Codes:

International Building Code

Planning & Design Criteria to Prevent Architectural Barriers for the Aged and the Physically Handicapped.

Year

2006

International Mechanical Code

International Plumbing Code

Ashrae/IES Energy Code

National Electrical Code

Year

2006

2004

2004

A. Occupancy and Group :

EXISTING BUILDING

Change in Use :

Yes

No

Mixed Occupancy :

Yes

No

B. Type of Construction (Circle)

I

II

III

IV

V

F.R.

F.R.

1 HR.

B

1 HR.

N

H.T.

1 HR.

N

C. Location on Property :

F.R. Ext. Walls (Hrs.):

N.R.

Ext. Wall Opening(s) Protection (Hrs.)

N.R.

D. Occupancy separation required (Hrs.):

Sprinklered: Indicate Yes or No

Stories :

1 or multiple

a. Actual Area²(ft)

EXISTING

b. Basic allowable area :

c. Allowable Area Increase due to side yards: N

d. Side yard area increase (ft): N.A.

Accumulative sub-total (b+d):

Sprinkler: area increase (x3 single) (x 2 multi)

e. Total Allowable Area for a single story: N.A.

x 2 for multi-story building:

f. Ratio = a/e (Actual divided by allowable)

E. Fire-Resistive Requirements

N.A.

(Hrs.): (1 Hr., 2Hr., 3Hr., 4Hr., N. H.T.)

Exterior Bearing Walls:

Interior Bearing Walls:

Exterior Non-bearing Walls:

Structural Frame:

Partitions - Permanent:

(OCCUPANCY SEPARATION - N.A.)

Floors - Ceiling Floors

Roofs - Ceiling Roofs

Exterior Doors and Windows

Shaft Enclosures



State of Utah—Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

4110 State Office Building / Salt Lake City, Utah 84114 / 538-3018

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DRAWING INDEX:


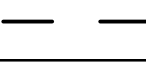
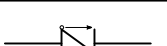
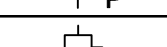
- G001 - COVER SHEET
- M001 - MECHANICAL GENERAL NOTES & LEGEND
- MD401 - LARGE SCALE BOILER ROOM DEMOLITION PLAN
- MD402 - MECHANICAL DEMOLITION PHOTO DETAILS
- ME401 - LARGE SCALE BOILER ROOM PLAN
- ME501 - MECHANICAL DETAILS
- ME601 - MECHANICAL SCHEDULES

D

C

B

A

MECHANICAL LEGEND								
SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION
GENERAL TERMINOLOGY			WET SIDE			WET SIDE CONT		
		SECTION LETTER DESIGNATION			PUMP			PITCH DOWN
		SECTION DRAWN ON THIS SHEET			UNION			ELBOW UP
		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION			MANUAL ACTUATOR (BALL, BUTTERFLY, NEEDLE, ETC. VALVES)			ELBOW DOWN
		MECHANICAL EQUIPMENT DESIGNATION			MANUAL ACTUATOR (GATE, GLOBE, S&D, OS&Y, ETC. VALVES)			TEE UP
		EQUIPMENT ITEM DESIGNATION						TEE DOWN
		GRILLE, OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRE			THREADED OR SWEAT VALVE CONNECTION			EXISTING PIPING TO BE REMOVED
		REVISION DESIGNATOR AND NUMBER			FLANGED VALVE CONNECTION			EXISTING PIPING TO REMAIN
		KEY NOTE DESIGNATOR AND NUMBER			BUTTERFLY VALVE			NEW PIPING
	POC	POINT OF CONNECTION			GATE VALVE			PIPE CAP OR PLUG
	POR	POINT OF REMOVAL			CHECK VALVE			CONCENTRIC REDUCER
AFF		ABOVE FINISHED FLOOR		PRV	PRESSURE REDUCING VALVE			ECCENTRIC REDUCER
¢ EL.		CENTER LINE ELEVATION		CBV	CIRCUIT BALANCING VALVE			EXPANSION JOINT
GC		GENERAL CONTRACTOR		BV	BALL VALVE			NATURAL GAS PIPING
MC		MECHANICAL CONTRACTOR		PRV	PRESSURE RELIEF VALVE			CHEMICAL FEED LINE
EC		ELECTRICAL CONTRACTOR			AUTOMATIC AIR VENT		CW	CULINARY COLD WATER
NIC		NOT IN CONTRACT			MANUAL AIR VENT			EQUIPMENT DRAIN
NTS		NOT TO SCALE			STRAINER			HEATING WATER SUPPLY
					STRAINER W/ PLUGGED BLOW OFF			HEATING WATER RETURN
SYMBOL	ABR.	DESCRIPTION		VTI	VENTURI			
		EXISTING EQUIPMENT TO BE REMOVED			PRESSURE GAUGE AND GAUGE COCK - WATER			
		EXISTING EQUIPMENT TO REMAIN			THERMOMETER AND THERMOWELL			
		NEW EQUIPMENT		TW	THERMOWELL			
					DIRECTION OF FLOW			

GENERAL NOTES:

- G-1

MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR EXISTING CONDITIONS AND ANY OBSTRUCTIONS THAT COULD EFFECT THE CONTRUCTION SCOPE.
- A

EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.
- B

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.
- C

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.
- D

THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.
- E

ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.
- G-2

ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER FOR APPROVAL. CONTRACTOR SHALL BE NOTIFIED IN WRITING PRIOR TO ANY CHANGES.
- G-3

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.
- G-4

THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS.
- G-5

THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.
- G-6

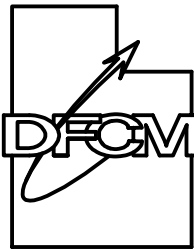
SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.
- G-7

CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.
- G-8

ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2006 EDITION OF THE IMC AND IPC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.
- G-9

THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND RE-FILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN RE-FILLING THE SYSTEM.
- G-10

CONTRACTOR SHALL CONTRACT WITH A DESIGN BUILD ELECTRICAL CONTRACTOR TO PROVIDE ALL THE ELECTRICAL AND CONTROLS WORK REQUIRED BY SCOPE OF WORK.



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PROJECT NAME & ADDRESS

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PROJECT MANAGER:
SW
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LGD
CHECKED BY:
WP
DATE:
06/29/07
WHW JOB NO.:
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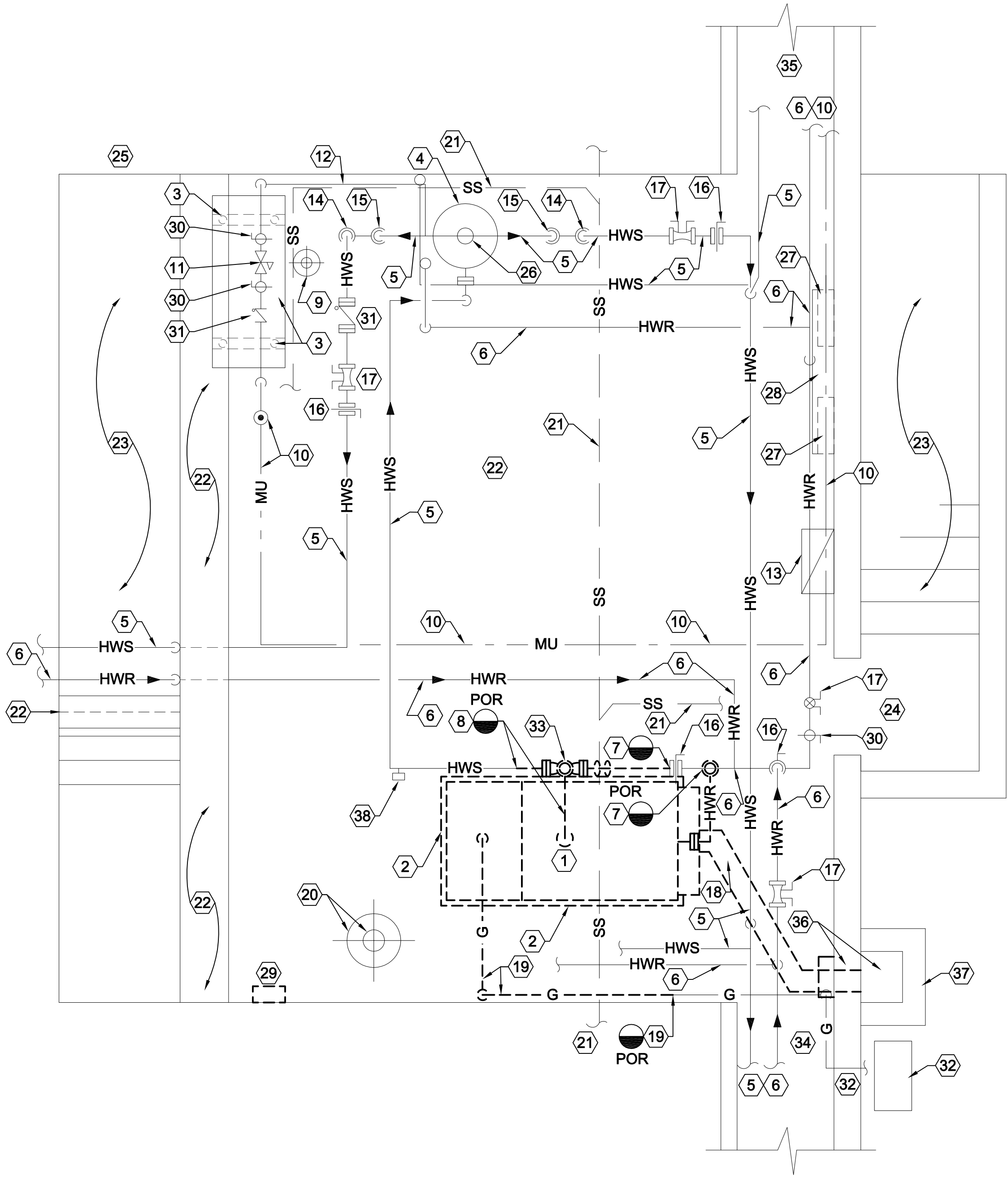


SHEET TITLE

**MECHANICAL GENERAL
NOTES AND LEGEND**

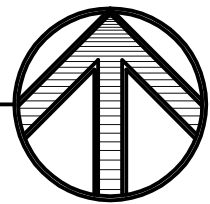
SHEET NO.

M001



LARGE SCALE BOILER ROOM DEMOLITION PLAN

SCALE: 3/8" = 1'-0"

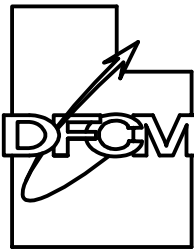


SHEET NOTES

SHEET NOTES:

- 1) REMOVE EXISTING GAS FIRED HOT WATER BOILER AND ALL ASSOCIATED CONNECTIONS, ELECTRICAL, BURNER, CONTROLS ETC.
- 2) REMOVE EXISTING 7'-7" LONG x 4'-0" x 4" THICK CONCRETE PAD.
- 3) EXISTING HORIZONTAL COMPRESSION TANK AND SUPPORTS SHALL REMAIN.
- 4) EXISTING AIR ELIMINATOR SHALL REMAIN.
- 5) EXISTING HOT WATER SUPPLY PIPING SHALL REMAIN.
- 6) EXISTING HOT WATER RETURN PIPING SHALL REMAIN.
- 7) REMOVE EXISTING HOT WATER RETURN PIPING FROM BOILER CONNECTION BACK TO MAIN. PROVIDE PIPING CAP AT CONNECTION TO MAIN.
- 8) REMOVE EXISTING HOT WATER SUPPLY FROM THIS POINT BACK TO BOILER.
- 9) EXISTING POT FEEDER AND PIPING SHALL REMAIN.
- 10) EXISTING CULINARY WATER MAKE-UP LINE COMPLETE WITH BACKFLOW PREVENTOR SHALL REMAIN.
- 11) HEATING HOT WATER SYSTEM MAKE-UP WATER C/W CHECK VALVE, BALL VALVES, PRV VALVE ETC. SHALL REMAIN.
- 12) AIR LINE RELIEF FROM AIR FITTING ON AIR ELIMINATOR TO COMPRESSION TANK SHALL REMAIN.
- 13) EXISTING COMBUSTION AIR SHALL BE RENOVATED TO MEET CODE. SEE SHEET ME101.
- 14) EXISTING INLINE HEATING HOT WATER SUPPLY PUMP SHALL REMAIN. PUMPS ARE LOCATED IN VERTICAL PIPE RISER.
- 15) EXISTING BUTTERFLY VALVE AND STRAINER LOCATED IN THE VERTICAL DROP SHALL REMAIN.
- 16) EXISTING BUTTERFLY VALVE SHALL REMAIN. CONTRACTOR HAS CHOICE TO REMOVE VALVE AT HWR MAIN NEAR BOILER OR LEAVE FOR ISOLATION.
- 17) EXISTING BALANCING VALVE SHALL REMAIN.
- 18) REMOVE EXISTING BOILER STACK HANGERS, SUPPORTS, ETC.
- 19) REMOVE EXISTING GAS PIPING FROM REMOVED BURNER TO THIS POINT. REMAINDER OF GAS PIPING SHALL REMAIN.
- 20) EXISTING SUMP AND PUMP SHALL REMAIN INCLUDING ALL PIPING VALVES ETC.
- 21) EXISTING OVERHEAD SEWER PIPING SHALL REMAIN.
- 22) EXISTING OVERHEAD CONCRETE BEAMS.
- 23) EXISTING STAIRS.
- 24) ACCESS DOOR FROM OUTSIDE.
- 25) ACCESS DOOR FROM INTERIOR.
- 26) AIR SEPARATOR FITTING ON TOP OF TANK SHALL REMAIN.
- 27) EXISTING ELECTRICAL PANELS SHALL REMAIN.
- 28) EXISTING BUSS DUCT SHALL REMAIN.
- 29) REMOVE EXISTING BOILER CONTROL PANEL. ELECTRICAL SHALL REMAIN FOR NEW PANEL.
- 30) BALL VALVES SHALL REMAIN.
- 31) CHECK VALVES SHALL REMAIN.
- 32) EXISTING GAS LINE THROUGH EXTERIOR WALL TO AND INCLUDING GAS METER SHALL REMAIN.
- 33) REMOVE EXISTING 3-WAY CONTROL VALVE. RE-USE FOR NEW SYSTEM IN LOCATION SHOWN ON SHEET ME401.
- 34) EXISTING SOUTH TUNNEL ENTRANCE FROM BOILER ROOM.
- 35) EXISTING NORTH TUNNEL ENTRANCE FROM BOILER ROOM.
- 36) EXISTING CHIMNEY ENTRANCE SHALL BE REMOVED AND CONCRETE WALL PATCHED. FIELD VERIFY IF EXISTING BOILER BREECHING IS CONTINUOUS UP TO THE TOP OF CHIMNEY. IF SO, CONTRACTOR SHALL REMOVE BREECHING FROM INSIDE CHIMNEY.
- 37) EXISTING CHIMNEY SHALL REMAIN.
- 38) TEMPERATURE CONTROLLER SHALL REMAIN.

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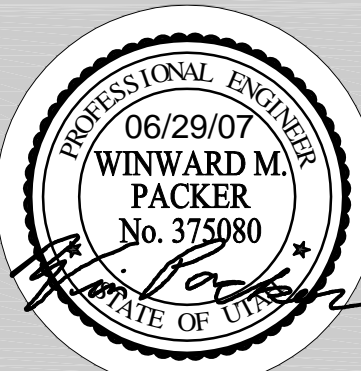
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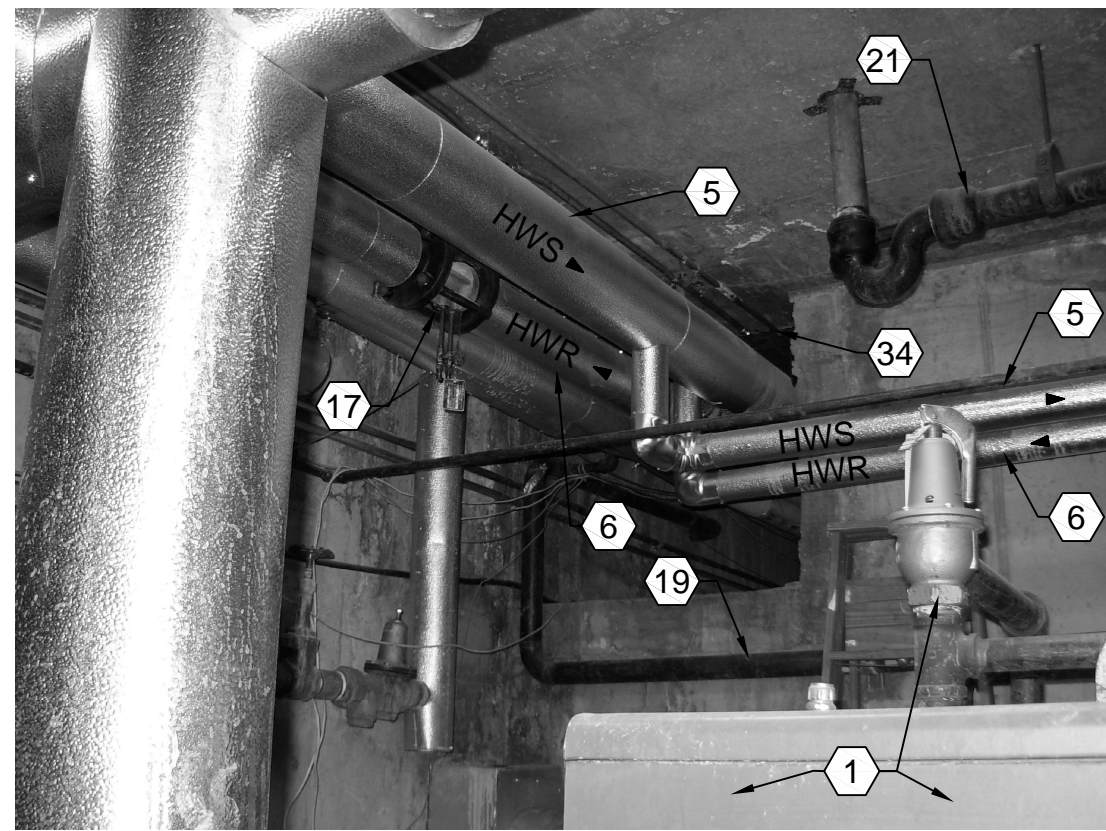
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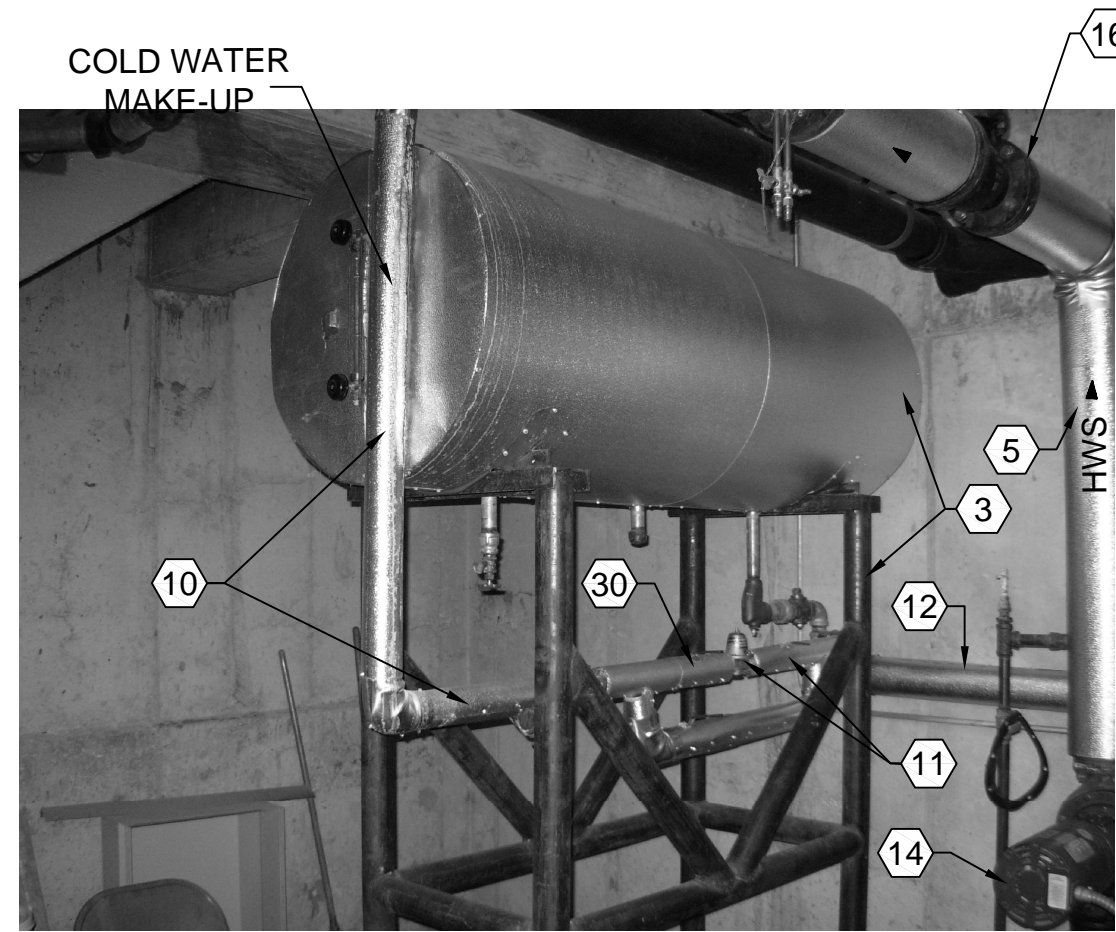
SHEET TITLE
**LARGE SCALE BOILER
ROOM DEMOLITION PLAN**

SHEET NO.

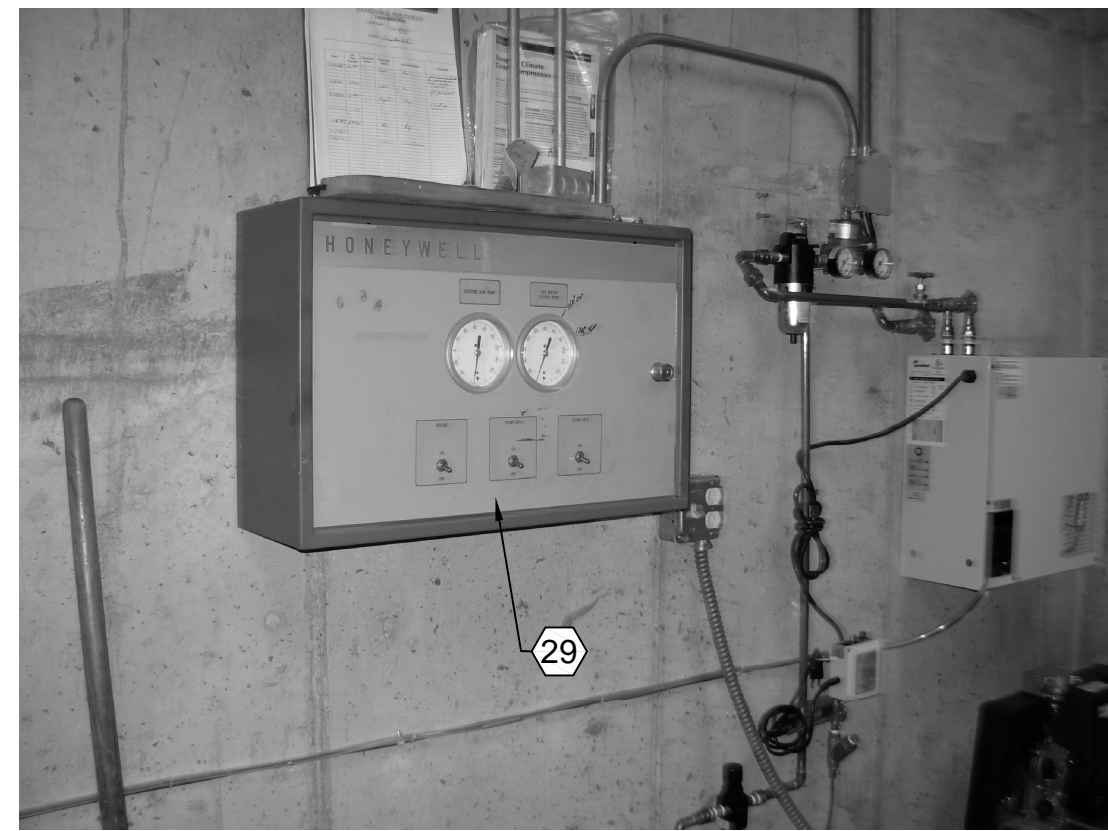
MD401



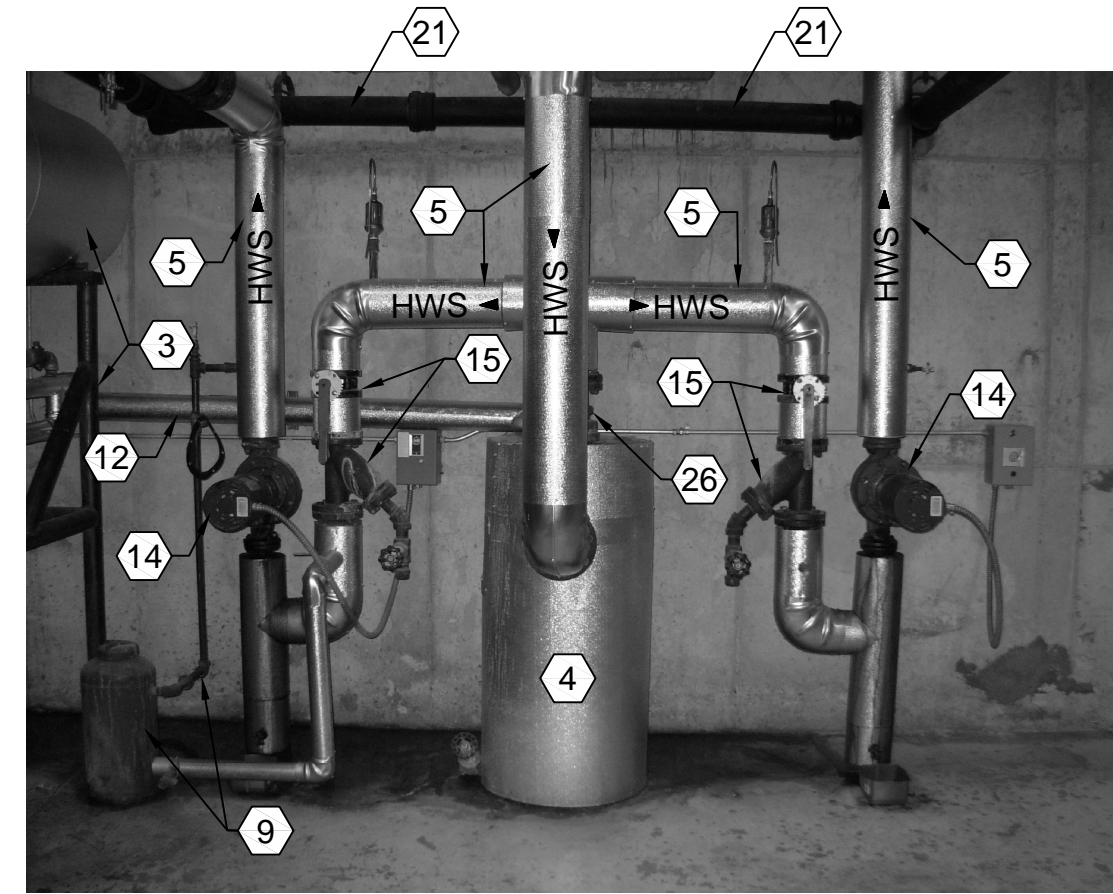
C1 SOUTH TUNNEL ENTRANCE
SCALE: NONE



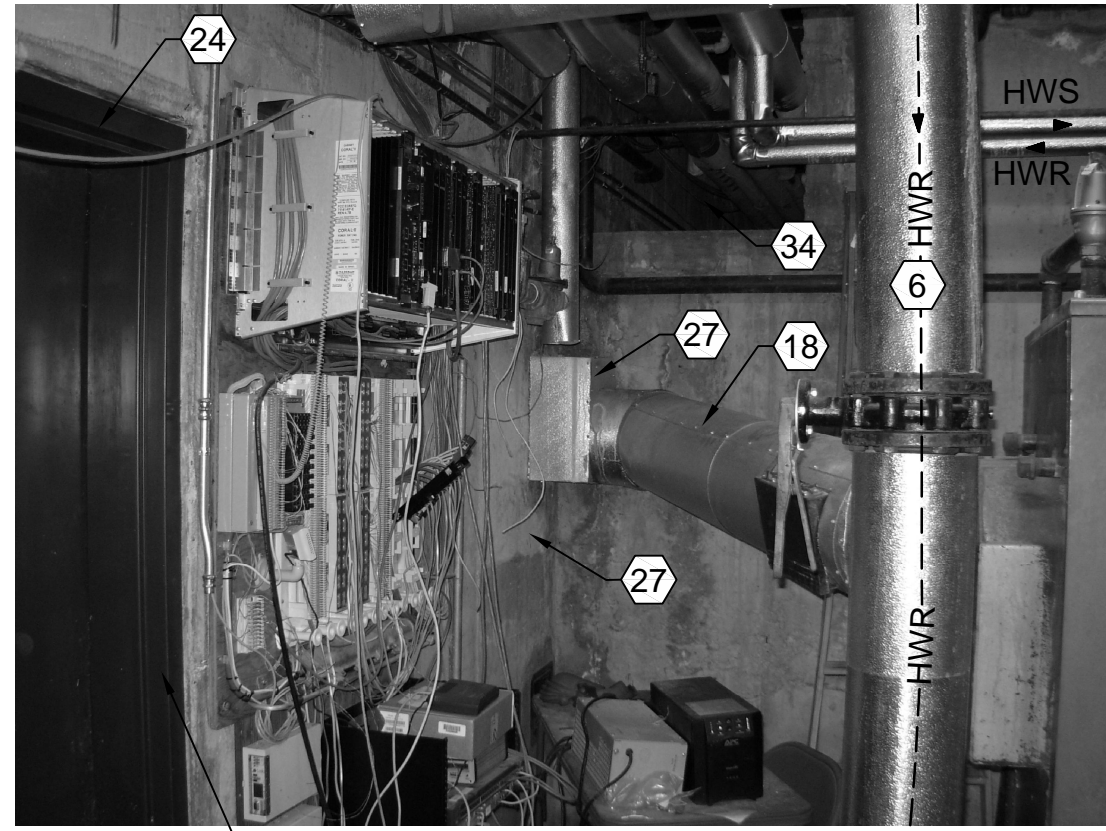
C2 COMPRESSION TANK & MAKE-UP
SCALE: NONE



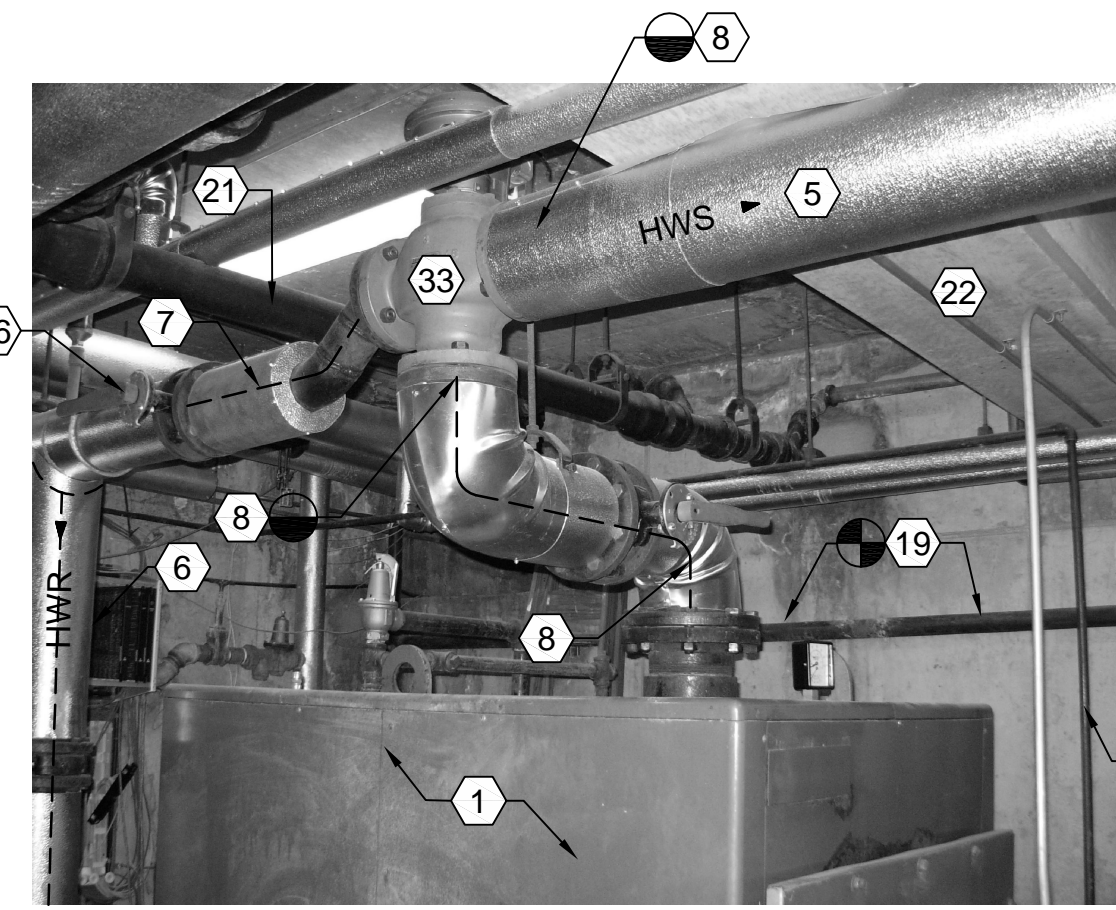
C3 EXISTING BOILER CONTROL PANEL
SCALE: NONE



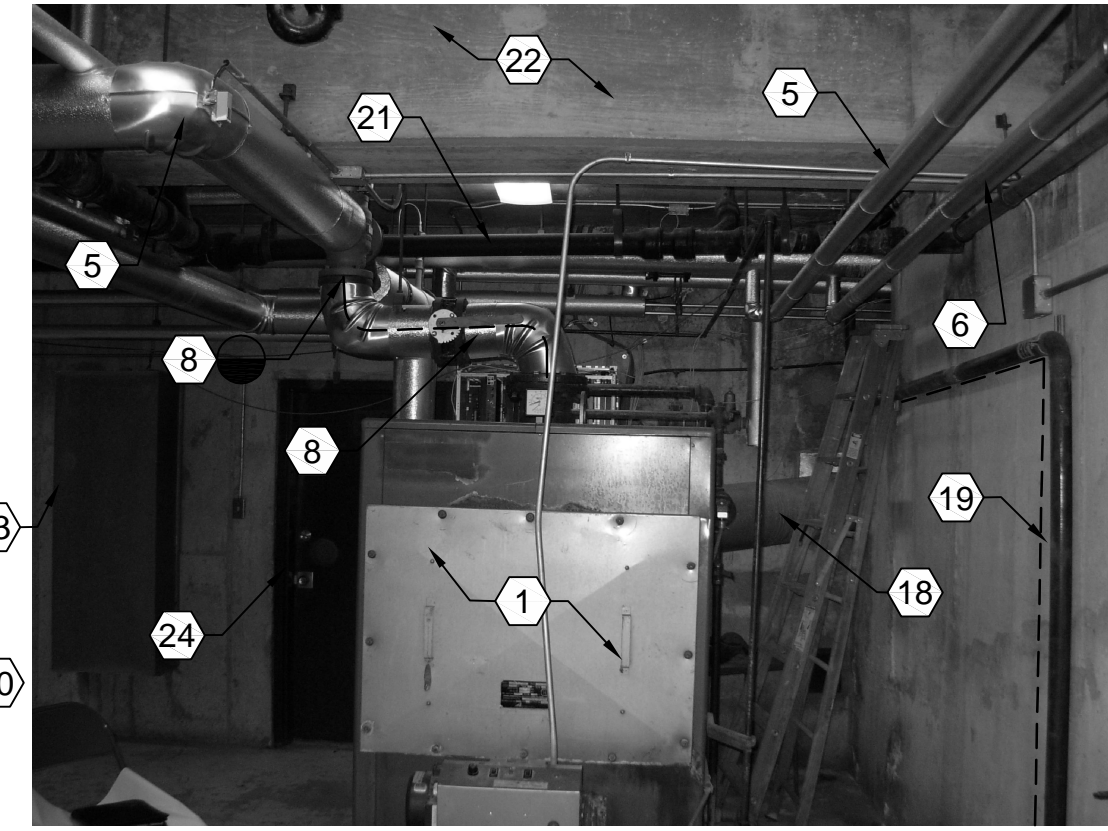
C4 HWS HEADER
SCALE: NONE



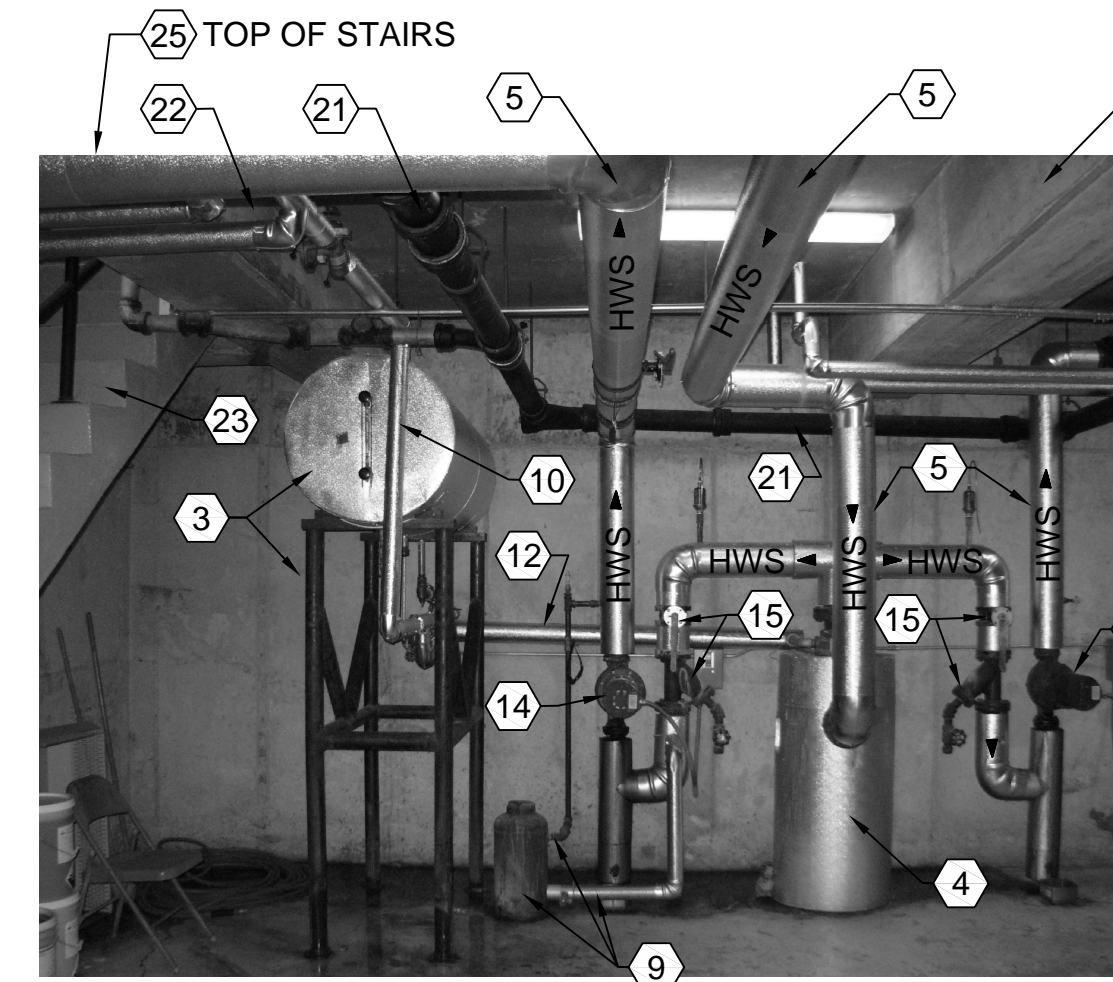
B1 BOILER STACK/CHIMNEY ENTRANCE
SCALE: NONE



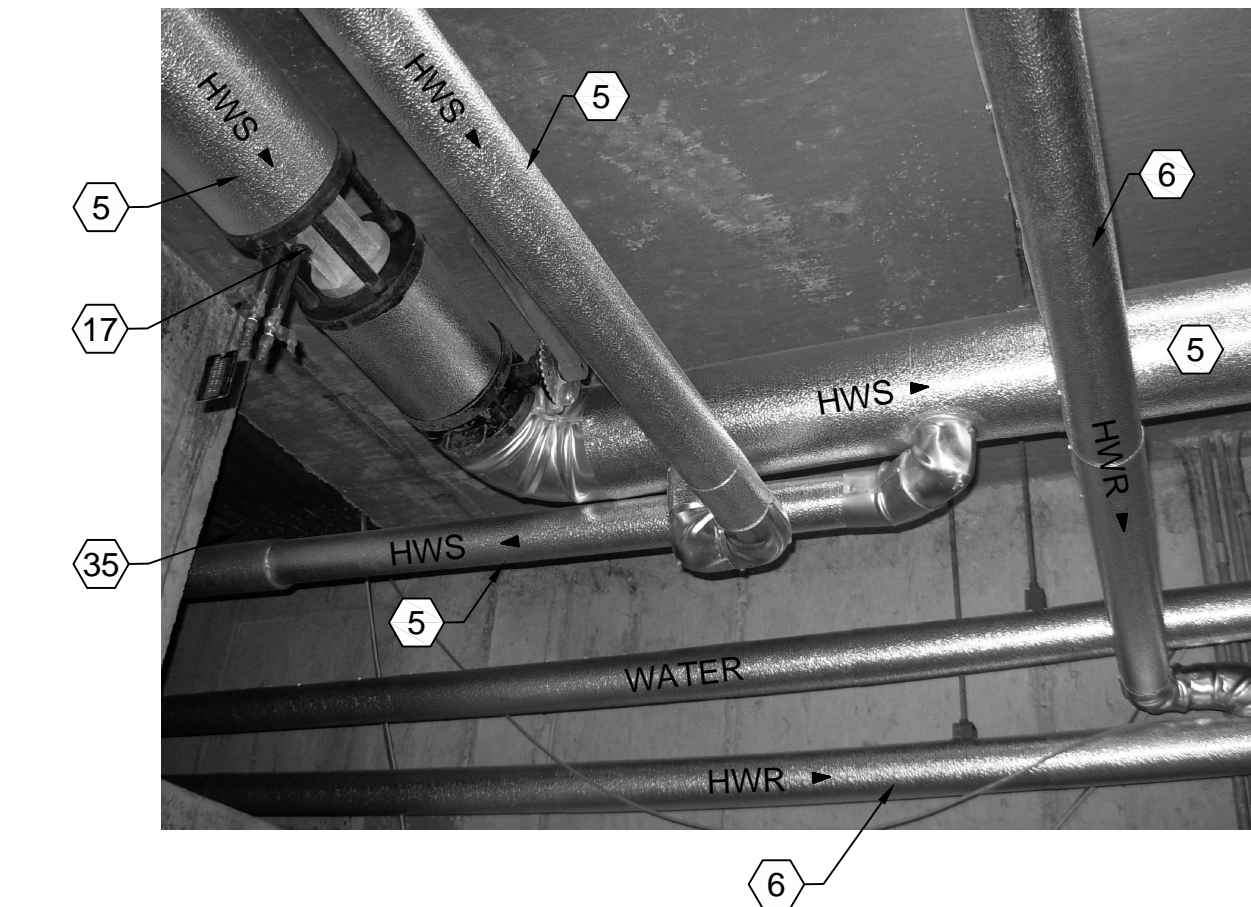
B2 HWS HEADER
SCALE: NONE



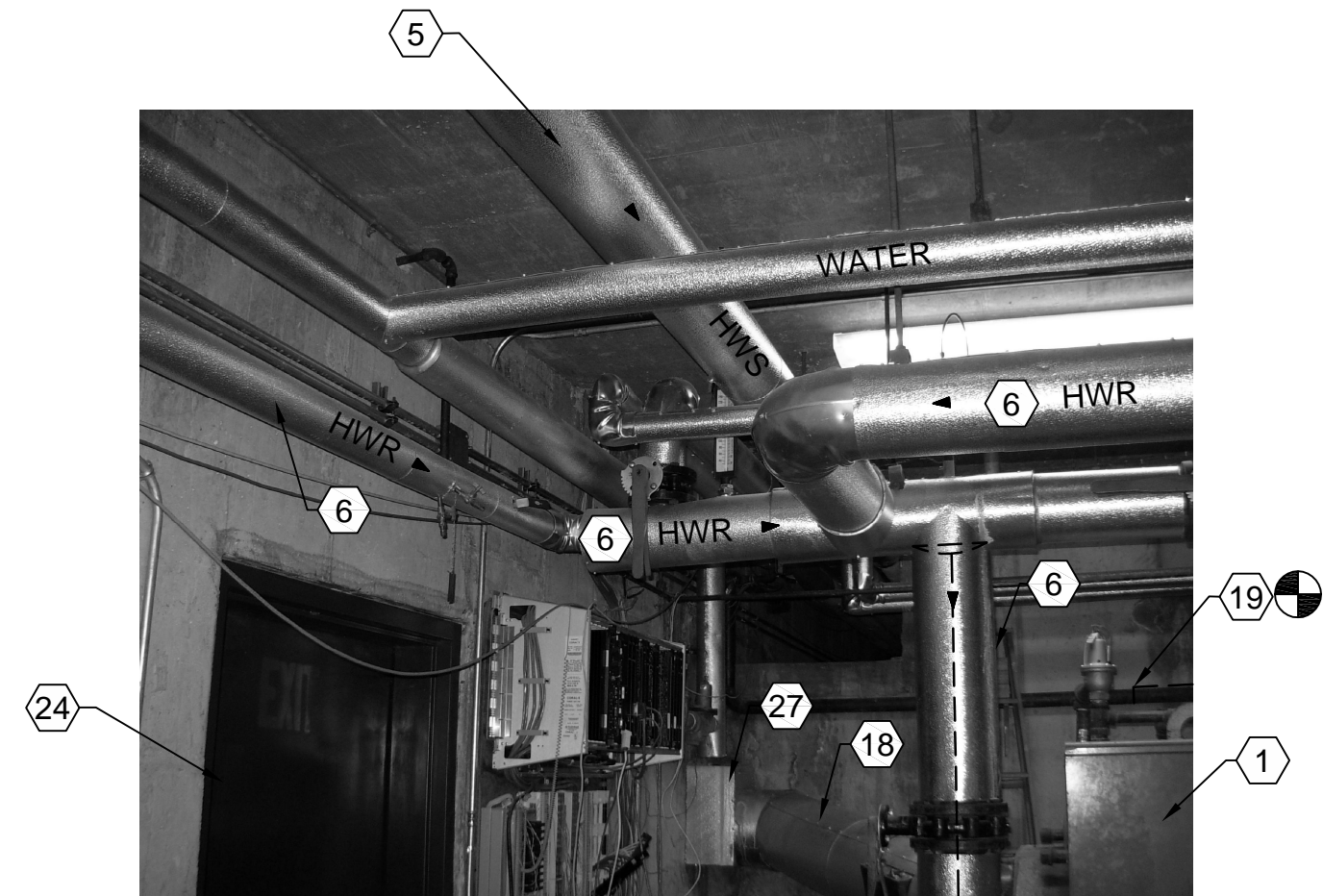
B3 EXISTING BOILER DEMOLITION
SCALE: NONE



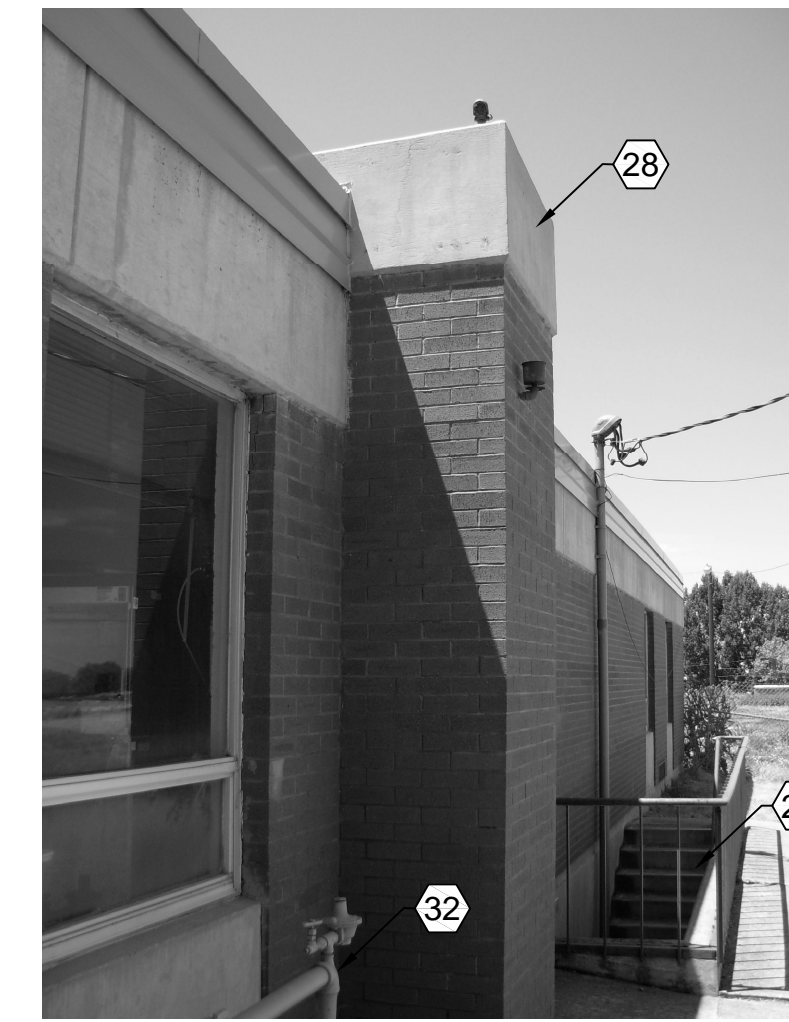
B4 HWS COMPRESSION TANK, MAKE-UP, PUMP & AIR ELIMINATOR
SCALE: NONE



A1 NORTH TUNNEL ENTRANCE
SCALE: NONE



A2 HWR HEADER
SCALE: NONE



A4 EXTERIOR GAS METER AND CHIMNEY
SCALE: NONE

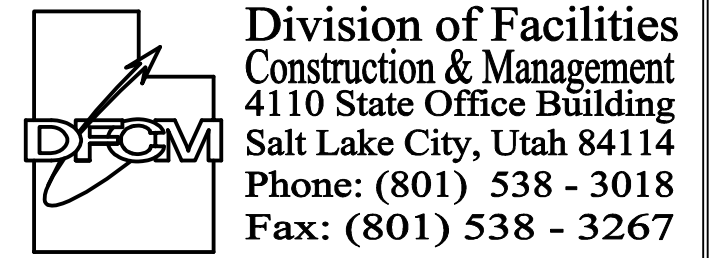
SHEET NOTES

SHEET NOTES:

- ① REMOVE EXISTING GAS FIRED HOT WATER BOILER AND ALL ASSOCIATED CONNECTIONS, ELECTRICAL, BURNER, CONTROLS ETC.
- ② REMOVE EXISTING 7'-7" LONG x 4'-0" x 4" THICK CONCRETE PAD.
- ③ EXISTING HORIZONTAL COMPRESSION TANK AND SUPPORTS SHALL REMAIN.
- ④ EXISTING AIR ELIMINATOR SHALL REMAIN.
- ⑤ EXISTING HOT WATER SUPPLY PIPING SHALL REMAIN.
- ⑥ EXISTING HOT WATER RETURN PIPING SHALL REMAIN.
- ⑦ REMOVE EXISTING HOT WATER RETURN PIPING FROM BOILER CONNECTION BACK TO MAIN. PROVIDE PIPING CAP AT CONNECTION TO MAIN.
- ⑧ REMOVE EXISTING HOT WATER SUPPLY FROM THIS POINT BACK TO BOILER.
- ⑨ EXISTING POT FEEDER AND PIPING SHALL REMAIN.
- ⑩ EXISTING CULINARY WATER MAKE-UP LINE COMPLETE WITH BACKFLOW PREVENTOR SHALL REMAIN.
- ⑪ HEATING HOT WATER SYSTEM MAKE-UP WATER C/W CHECK VALVE, BALL VALVES, PRV VALVE ETC. SHALL REMAIN.
- ⑫ AIR LINE RELIEF FROM AIR FITTING ON AIR ELIMINATOR TO COMPRESSION TANK SHALL REMAIN.
- ⑬ EXISTING COMBUSTION AIR SHALL BE RENOVATED TO MEET CODE. SEE SHEET ME101.
- ⑭ EXISTING INLINE HEATING HOT WATER SUPPLY PUMP SHALL REMAIN.
- ⑮ EXISTING BUTTERFLY VALVE AND STRAINER SHALL REMAIN.
- ⑯ EXISTING BUTTERFLY VALVE SHALL REMAIN OR BE REMOVED. CHOICE IS UP TO THE CONTRACTOR.
- ⑰ EXISTING BALANCING VALVE SHALL REMAIN.
- ⑱ REMOVE EXISTING GAS PIPING FROM REMOVED BURNER TO THIS POINT. REMAINDER OF GAS PIPING SHALL REMAIN.
- ⑳ EXISTING SUMP AND PUMP SHALL REMAIN INCLUDING ALL PIPING VALVES ETC.
- ㉑ EXISTING OVERHEAD SEWER PIPING SHALL REMAIN.
- ㉒ EXISTING OVERHEAD CONCRETE BEAMS.
- ㉓ EXISTING STAIRS.
- ㉔ ACCESS DOOR FROM OUTSIDE.
- ㉕ ACCESS DOOR FROM INTERIOR.
- ㉖ AIR SEPARATOR FITTING ON TOP OF TANK SHALL REMAIN.
- ㉗ EXISTING CHIMNEY ENTRANCE SHALL BE REMOVED AND CONCRETE WALL PATCHED. FIELD VERIFY IF EXISTING BOILER BREECHING IS CONTINUOUS UP TO THE TOP OF CHIMNEY. IF SO, CONTRACTOR SHALL REMOVE BREECHING FROM INSIDE CHIMNEY.
- ㉘ EXISTING CHIMNEY SHALL REMAIN.
- ㉙ REMOVE EXISTING BOILER CONTROL PANEL. ELECTRICAL SHALL REMAIN FOR NEW PANEL.
- ㉚ BALL VALVES SHALL REMAIN.
- ㉛ CHECK VALVES SHALL REMAIN.
- ㉜ EXISTING GAS LINE THROUGH EXTERIOR WALL TO AND INCLUDING GAS METER SHALL REMAIN.
- ㉝ REMOVE EXISTING 3-WAY CONTROL VALVE AND SET ASIDE FOR REINSTALLATION INTO NEW PIPING.
- ㉞ EXISTING SOUTH TUNNEL ENTRANCE FROM BOILER ROOM.
- ㉟ EXISTING NORTH TUNNEL ENTRANCE FROM BOILER ROOM.

State of Utah

Department of Administrative Services



Internet: <http://www.dfc.state.ut.us>

CONSULTANTS



PROJECT NAME & ADDRESS

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DFCM No. 07182470

Brigham City, Utah

MARK	DATE	REVISION

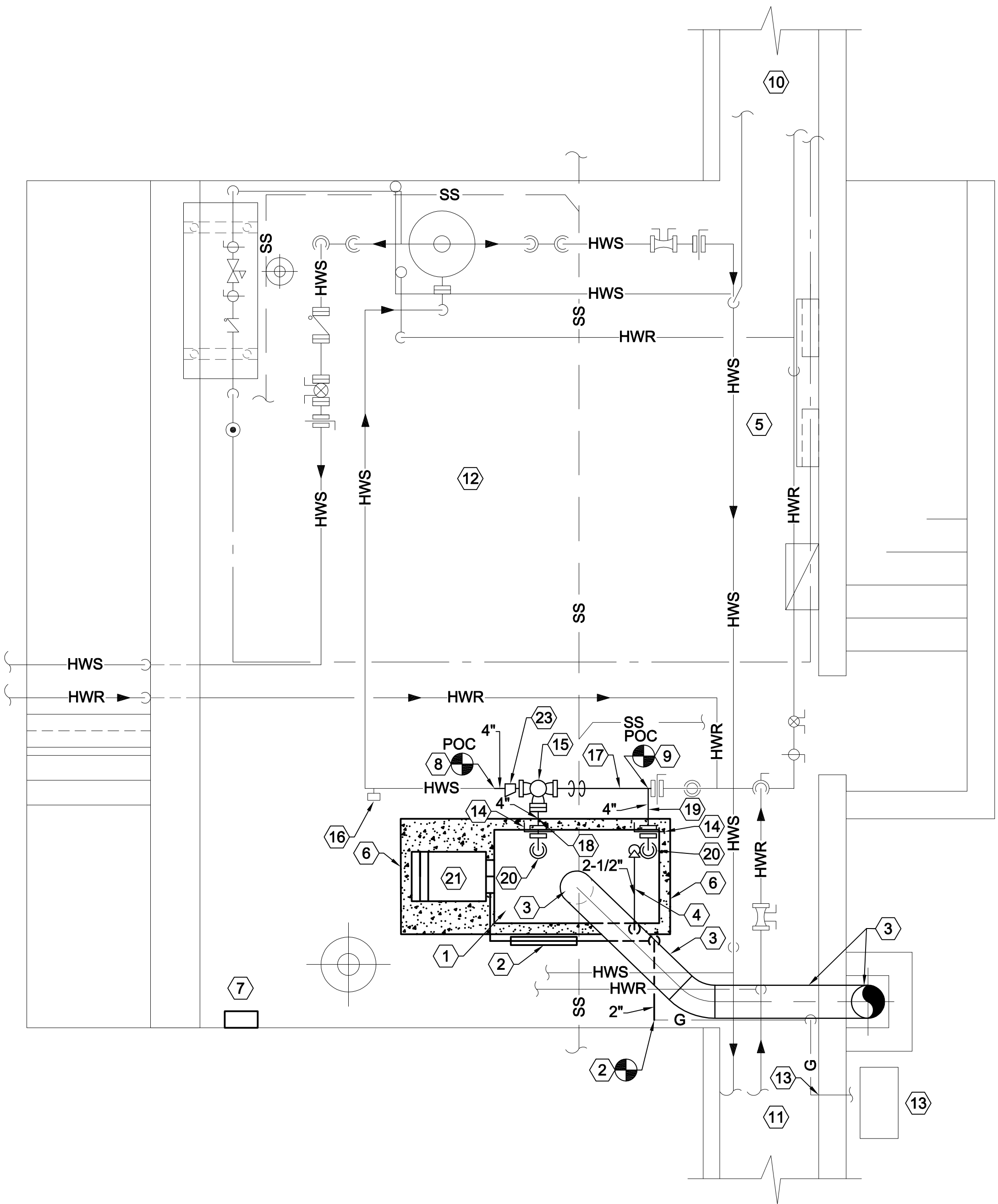
PROJECT MANAGER: SW	
DRAWN BY: LGD	
CHECKED BY: WP	
DATE: 06/29/07	
WHW JOB NO.: 07030	

SHEET TITLE

MECHANICAL DEMOLITION PHOTO-DETAILS

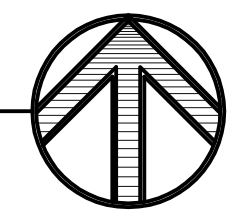
SHEET NO.

MD402



LARGE SCALE BOILER ROOM FLOOR PLAN

SCALE: 3/8" = 1'-0"

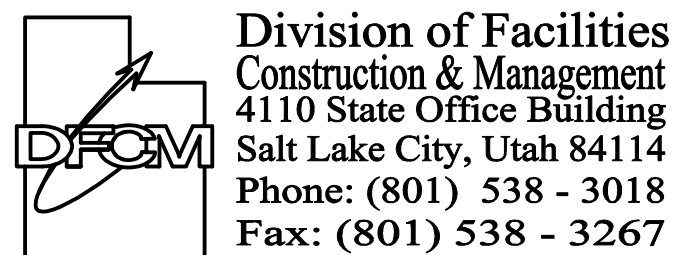


SHEET NOTES

SHEET NOTES:

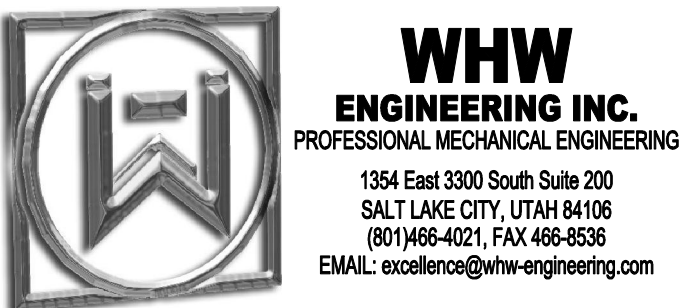
- ① PROVIDE NEW GAS FIRED HOT WATER BOILER AND CONNECT TO EXISTING PIPING AS SHOWN.
- ② PROVIDE NEW 2" GAS PIPING FROM THIS POINT TO NEW CSD-1 GAS TRAIN SEE DETAIL A4/ME501.
- ③ PROVIDE NEW 12" BOILER BREECHING FROM NEW BOILER TO EXISTING CHIMNEY WALL. DRILL THROUGH WALL AND EXTEND NEW BREECHING INSIDE EXISTING CHIMNEY AND RISE UP TO TOP OF CHIMNEY. SUPPORT BREECHING AS REQUIRED BY BREECHING MANUFACTURER.
- ④ ROUTE 2" RELIEF PIPING FROM BOILER PRESSURE RELIEF VALVE TO FLOOR. PROVIDE ONLY ONE 90° ELL IN DISCHARGE PIPING.
- ⑤ THIS CONTRACTOR SHALL EMPLOY A DESIGN BUILD ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL WORK.
- ⑥ PROVIDE NEW CONCRETE PAD. EXTEND PAD A MINIMUM OF 4" BEYOND BOILER AND BURNER ALL SIDES. SEE DETAIL D4/ME501.
- ⑦ PROVIDE NEW BOILER CONTROL PANEL IN SAME LOCATION AS REMOVED PANEL. CONNECT TO NEW BURNER AND BOILER CONTROLS.
- ⑧ CONNECT TO EXISTING HOT WATER SUPPLY PIPING AT THIS LOCATION. FIELD VERIFY EXACT LOCATION FOR TIE-IN.
- ⑨ CONNECT TO EXISTING HOT WATER RETURN PIPING AT THIS LOCATION. FIELD VERIFY EXACT LOCATION FOR TIE-IN.
- ⑩ NORTH TUNNEL ENTRANCE FROM BOILER ROOM. SEE A1/MD402.
- ⑪ SOUTH TUNNEL ENTRANCE FROM BOILER ROOM. SEE C1/MD402.
- ⑫ SEE MD401 & MD402 FOR ITEMS THAT ARE TO BE REMOVED AND ITEMS TO REMAIN.
- ⑬ EXISTING GAS METER AND GAS LINE THROUGH EXTERIOR WALL SHALL REMAIN.
- ⑭ NEW 4" BUTTERFLY VALVE C/W COMPANION 125# FLANGES.
- ⑮ EXISTING PNEUMATIC 3-WAY CONTROL VALVE. INSTALL IN NEW LOCATION. EXTEND PNEUMATIC TUBING TO CONTROLLER.
- ⑯ EXISTING TEMPERATURE CONTROLLER SHALL REMAIN. CONNECT TO 3-WAY VALVE AND OUTSIDE SENSOR FOR RESET SCHEDULE.
- ⑰ NEW 3" HWR PIPING BETWEEN RELOCATED 3-WAY VALVE AND EXISTING BUTTERFLY VALVE. PIPING SHALL BE ANGLED DOWN TO AVOID SEWER PIPING.
- ⑱ NEW 4" HWS PIPING FROM BOILER CONNECTION TO RELOCATED 3-WAY VALVE. SEE DETAIL B1/ME501.
- ⑲ NEW 4" HWR PIPING FROM BOILER CONNECTION TO NEW CONNECTION AS SHOWN.
- ⑳ NEW 3" - 125# FLANGES AND 4"x3" REDUCER IN BOILER CONNECTION. SEE B1/ME501.
- ㉑ NEW BURNER BY BOILER MANUFACTURER.
- ㉒ CONTRACTOR SHALL BE RESONSIBLE FOR METHOD OF BRINGING BOILER INTO BOILER ROOM. EXISTING BOILER MAY BE CUT-UP IN ORDER TO FIT THROUGH DOOR. NEW BOILER MAY BE BROKEN DOWN TO FIT THROUGH DOOR. COORDINATE WITH BOILER MANUFACTURER.
- ㉓ 4"x3" ECCENTRIC REDUCER. FLAT SIDE ON TOP.

State of Utah
Department of Administrative Services



Internet: <http://www.dfc.state.ut.us>

CONSULTANTS



PROJECT NAME & ADDRESS

**UTAH NATIONAL
GUARD BRIGHAM CITY
ARMORY-BOILER
REPLACEMENT**

DFCM No. 07182470

Brigham City, Utah

MARK	DATE	REVISION

PROJECT MANAGER:
SW
DRAWN BY:
LGD
CHECKED BY:
WP
DATE:
06/29/07
WHW JOB NO.:
07030



SHEET TITLE
**LARGE SCALE BOILER
ROOM PLAN**

SHEET NO.
ME401

CONSULTANTS



PROJECT NAME & ADDRESS

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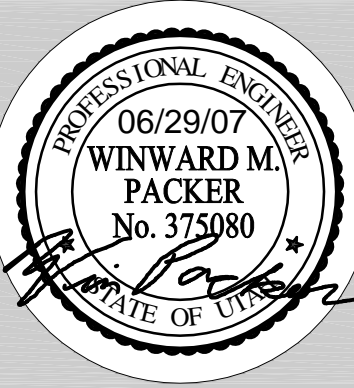
DATE:

06/29/07

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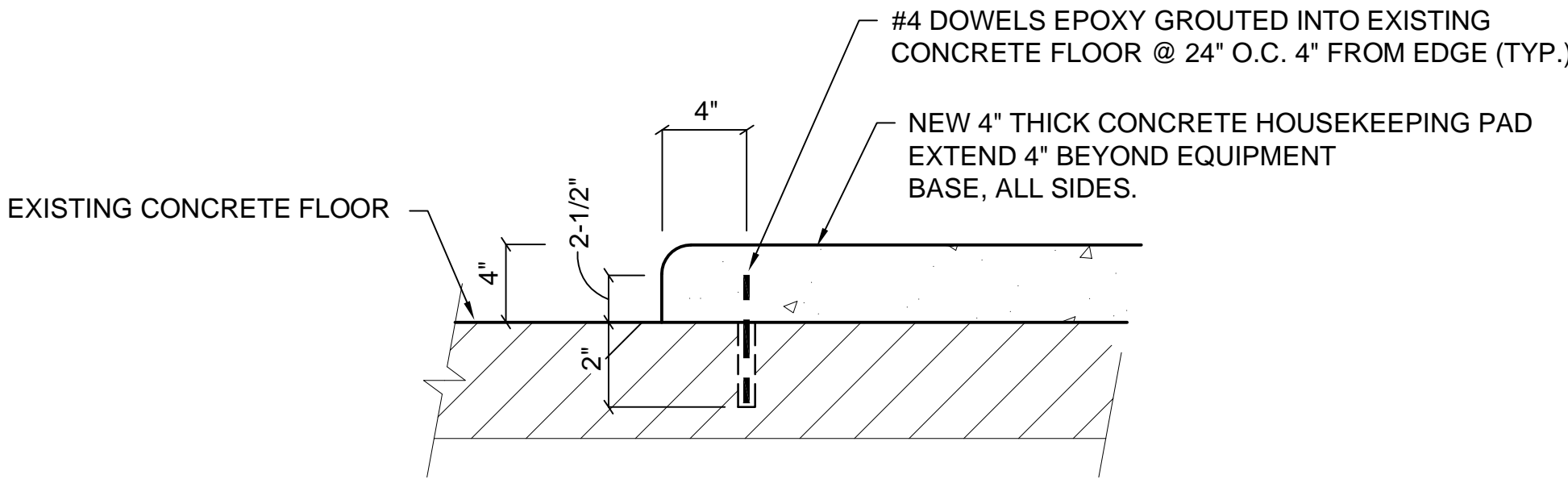
SHEET TITLE



MECHANICAL DETAILS

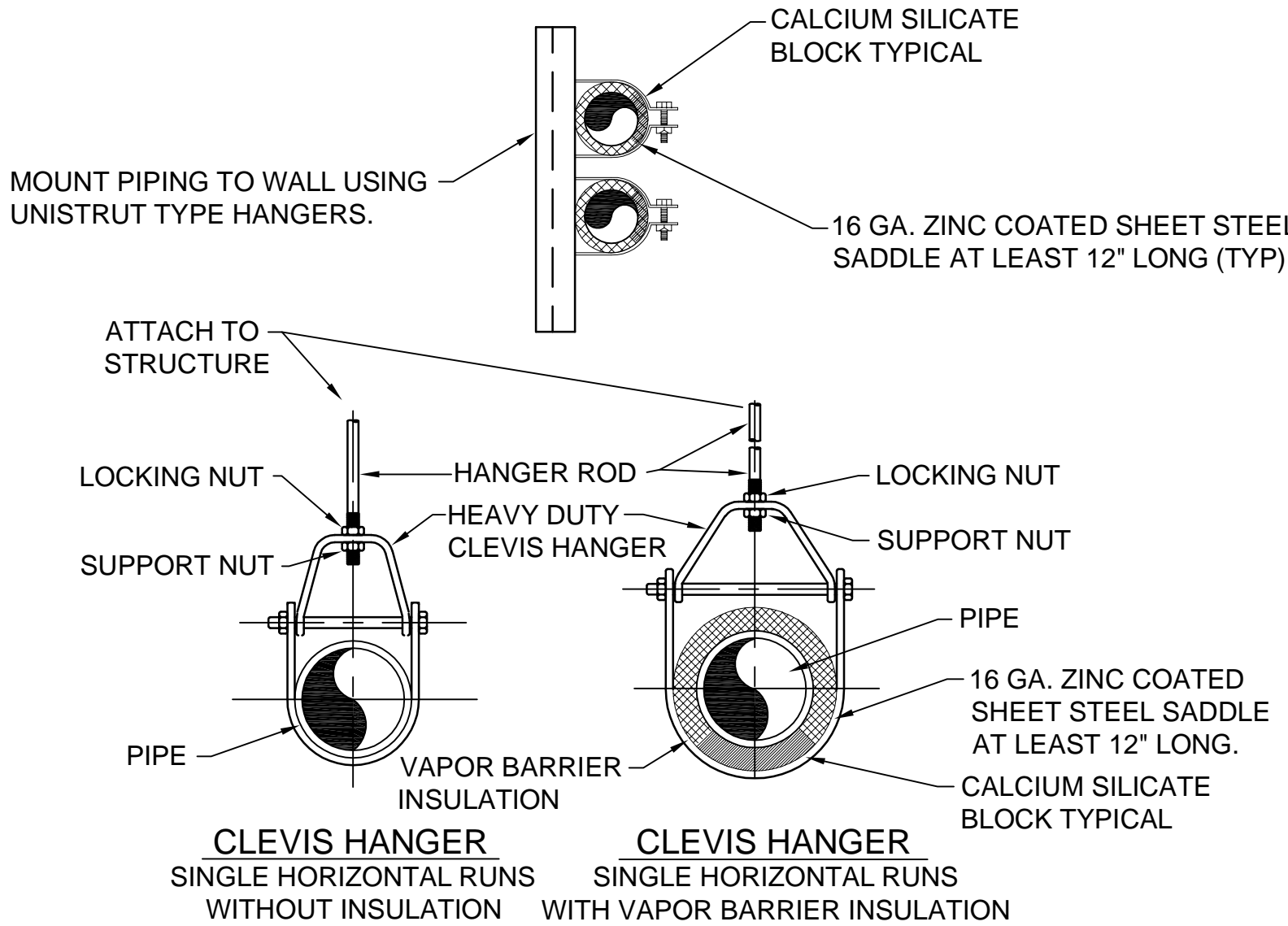
SHEET NO.

ME501



D4 CONCRETE HOUSEKEEPING PAD

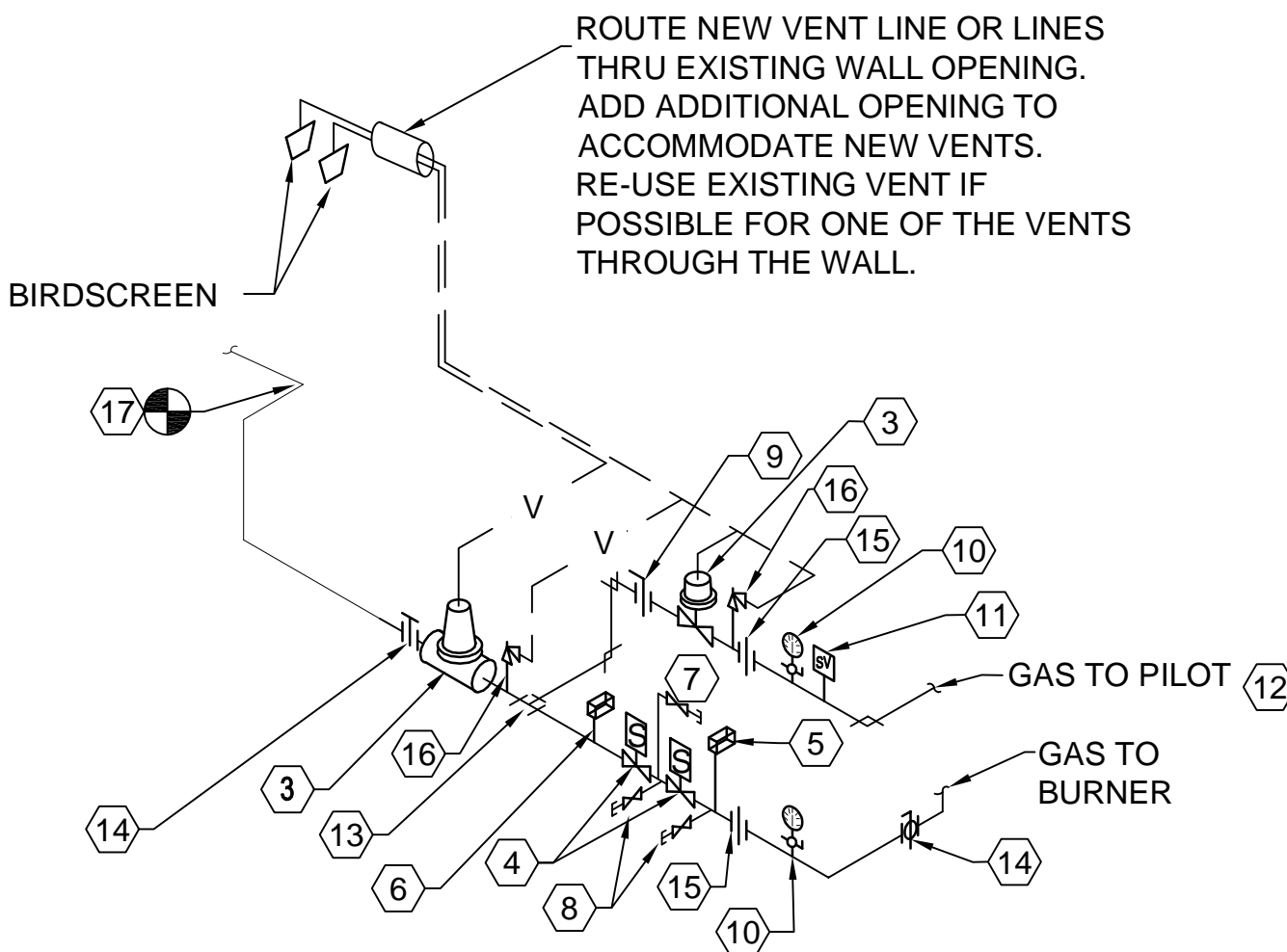
SCALE: NONE



B4 PIPE HANGER DETAIL

SCALE: NONE

LEGEND	
NO.	ITEM
1	GAS INLET
2	SUPPORT GAS TRAIN FROM PAD OR FLOOR
3	GAS PRESSURE REGULATOR
4	MOTORIZED SAFETY VALVE
5	HIGH PRESSURE SWITCH
6	LOW PRESSURE SWITCH
7	VENT VALVE AND VENT
8	TEST COCK
9	SHUT-OFF COCK
10	PRESSURE GAUGE/ SHUT-OFF
11	SOLENOID VALVE
12	GAS TO PILOT
13	GAS TAKE-OFF TO PILOT
14	SHUT-OFF VALVE
15	UNION
16	RELIEF VALVE-VENT TO ATMOSPHERE
17	CONNECT TO EXISTING GAS LINE THIS LOCATION. SEE SHEET ME401. FIELD VERIFY EXACT LOCATION.

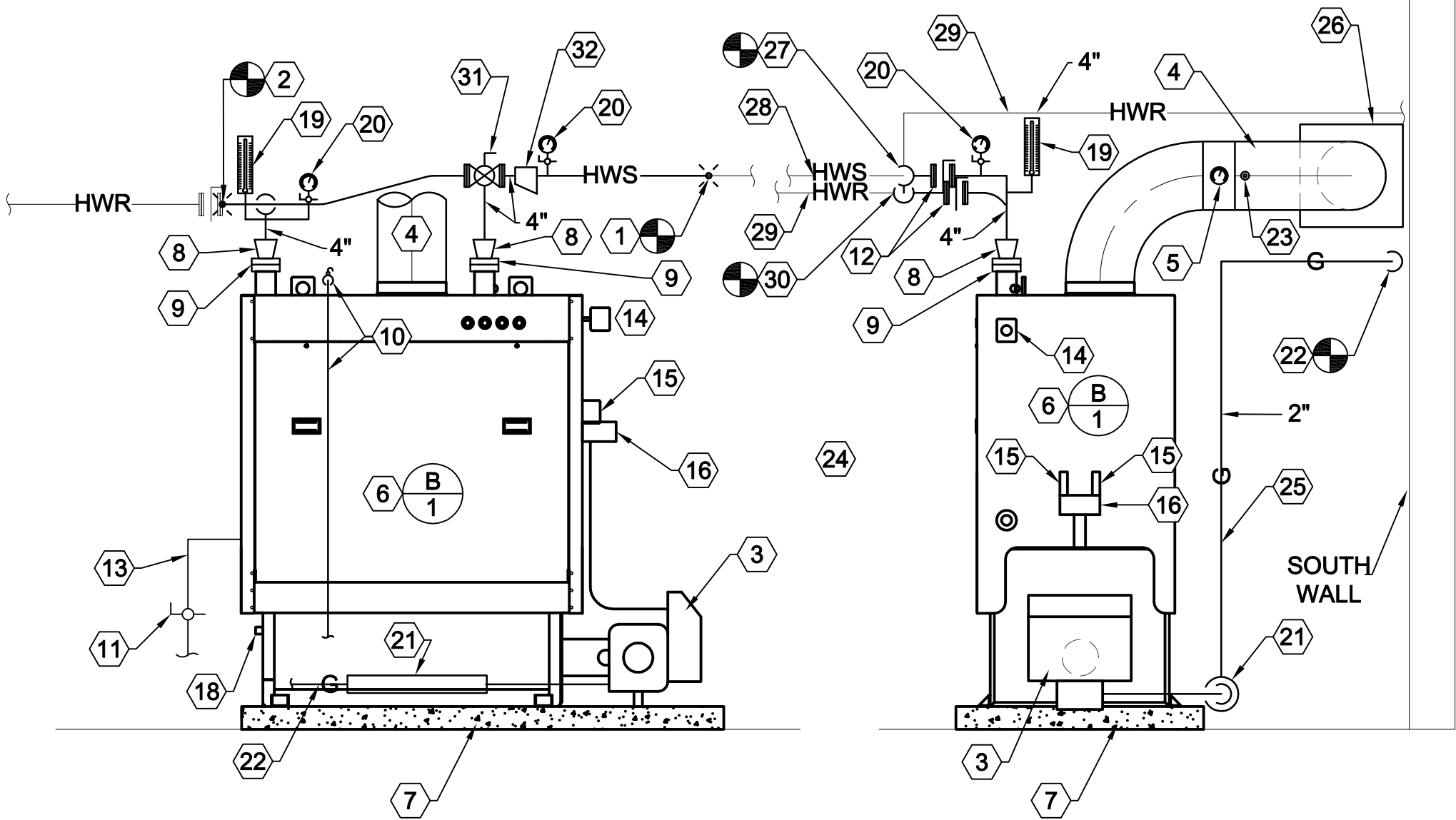


A4 CSD-1 AUTO-IGNITION GAS TRAIN DETAIL

SCALE: NONE

SHEET NOTES:

- 1 FIELD CONNECT TO EXISTING HWS PIPING. SEE ME101.
- 2 FIELD CONECT TO EXISTING HWR PIPINGS. SEE ME101.
- 3 NEW FORCED DRAFT BURNER AND PANEL BY BOILER MANUFACTURER.
- 4 NEW 12"Ø BOILER BREECHING. ROUTE TO EXISTING CHIMNEY.
- 5 PROVIDE STACK THERMOMETER IN BOILER BREECHING. USE ROUND THERMOMETER.
- 6 NEW BOILER B-1 SEE SCHEDULE. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
- 7 NEW 4" CONCRETE PAD. SEE DETAIL D4/THIS SHEET.
- 8 4"x3" CONCENTRIC REDUCER IN RISER.
- 9 PROVIDE NEW 3" - 125# FLANGES FOR BOILER CONNECTION.
- 10 BOILER PROVIDED RELIEF VALVE. PROVIDE NEW 2" RELIEF PIPING TO 4" ABOVE FLOOR.
- 11 BALL VALVE.
- 12 4" BUTTERFLY VALVE AND COMPANION FLANGES.
- 13 DRAIN LINE SAME SIZE AS BOILER CONNECTION C/W UNION AND BALL VALVE.
- 14 PROBE TYPE L.W.C.O.
- 15 AQUASTATS - TWO.
- 16 ELECTRICAL ENCLOSURE.
- 17 PRESSURE TEMPERATURE GAUGE.
- 18 FLAME OBSERVATION PORT.
- 19 THERMOMETER 0-250° F, 9" LONG.
- 20 PRESSURE GAUGE 0-100 PSIG WITH SNUBBER AND SHUT-OFF VALVE - 4-1/2" DIAMETER.
- 21 NEW CSD-1 GAS TRAIN. SEE DETAIL A4/THIS SHEET.
- 22 CONNECT TO EXISTING GAS PIPING. SEE SHEET ME101.
- 23 PROVIDE 1/2" TEST PORT CAP WITH NIPPLE AND CAP.
- 24 PROVIDE NIPPLES AND CAPS TO CLOSE ALL BOILER OPENINGS AND APPURTANCES NOT USED. DO NOT USE PLUGS.
- 25 NEW 2" GAS PIPING.
- 26 PROVIDE 20"x20" SHEET METAL PLATE AROUND 12" BREECHING. BOLT TO WALL. SEAL AROUND PLATE.
- 27 FIELD CONNECT TO EXISTING HWS PIPING. SEE SHEET ME101.
- 28 EXISTING HWS SHALL REMAIN.
- 29 EXISTING HWR SHALL REMAIN.
- 30 FIELD CONNECT TO EXISTING HWR PIPING. SEE SHEET ME101.
- 31 RE-INSTALL EXISTING 3-WAY AUTO VALVE.
- 32 4"x3" ECCENTRIC REDUCER FLAT SIDE ON TOP.



BOILER FRONT
AND SIDE ELEVATON AND PIPING DETAIL

B1

SCALE: 1/2" = 1'-0"

Internet: <http://www.dfcm.state.ut.us>

CONSULTANTS



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SHEET TITLE

MECHANICAL SCHEDULES

SHEET NO.

ME601

BOILER SCHEDULE

SYMBOL	MBH INPUT	MBH OUTPUT	WATER TEMP		BOILER HP	DELTA P FT	FAN MOTOR	OPERATION WEIGHT LBS	MAKE AND MODEL #	SCHEDULE NOTES
			IN	OUT						
	1,500	1.275	160°F	180°F	38			3304	BRYAN HECLM 150	1,2,3,4,5

1. BOILER RATINGS ARE FOR SEA LEVEL.
2. SEE SPECIFICATION FOR OTHER APPROVED MANUFACTURERS.
3. VERIFY FLUE SIZING AND MATERIAL WITH EACH BOILER MANUFACTURER AND INSTALL ACCORDINGLY.
4. PROVIDE 120V CONTROL CIRCUIT.
5. RELIEF VALVE- ONE (1) 1-1/2"x2 -VERIFY SIZING AND QUANTITY WITH BOILER INSTALL AND INSTALL ACCORDINGLY.